BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of	)	
	)	
PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2008-0273
	)	
Instituting a Proceeding to Investigate the Implementation of Feed-in Tariffs.	)	
	)	
	)	

THE SOLAR ALLIANCE AND HAWAII SOLAR ENERGY ASSOCIATION'S INFORMATION REQUESTS TO HAWAIIAN ELECTRIC COMPANY'S: (i) REPORT PREPARED BY MERRIMACK ENERGY GROUP, INC. ON THE DEVELOPMENT OF THE FEED-IN TARIFF QUEUING AND INTERCONNECTION PROCEDURES AND PROPOSAL FOR INITIAL IMPLEMENTATION; AND (ii) REPORT ON RELIABILITY STANDARDS

AND

CERTIFICATE OF SERVICE

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HAWAII SOLAR ENERGY
ASSOCIATION

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THE SOLAR ALLIANCE AND HAWAII SOLAR ENERGY ASSOCIATION'S INFORMATION REQUESTS TO HAWAIIAN ELECTRIC COMPANIES': (i) REPORT PREPARED BY MERRIMACK ENERGY GROUP, INC. ON THE DEVELOPMENT OF THE FEED-IN TARIFF QUEUING AND INTERCONNECTION PROCEDURES AND PROPOSAL FOR INITIAL IMPLEMENTATION; AND (ii) REPORT ON RELIABILITY STANDARDS

Pursuant to the Commission's October 29, 2009 Order Setting Schedule in this proceeding, The Solar Alliance and Hawaii Solar Energy Association hereby submit the following Information Requests to the Hawaiian Electric Companies' ("HECO Companies").[1]

Respectfully submitted.

DATED: Honolulu, Hawaii, February 16, 2010.

ISAAC MORIWAKE
Attorney for Hawaii Solar Energy Association

[1] The HECO Companies include Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited.

Respectfully submitted.

DATED: Honolulu, Hawaii,

RILEY SAITO

for The Solar Alliance

DOCKET NO. 2008-0273

THE SOLAR ALLIANCE AND HAWAII SOLAR ENERGY ASSOCIATION'S INFORMATION REQUESTS TO HAWAIIAN ELECTRIC COMPANIES' REPORT PREPARED BY MERRIMACK ENERGY GROUP, INC. ON THE DEVELOPMENT OF THE FEED-IN TARIFF QUEUING AND INTERCONNECTION PROCEDURES AND PROPOSAL FOR INITIAL IMPLEMENTATION

INSTRUCTIONS:

In order to expedite and facilitate The Solar Alliance and Hawaii Solar Energy Association's ("SA/HSEA") review and analysis in the above matter, the following is requested:

1. For each response, the HECO Companies should identify the person who is responsible for preparing the response as well as the witness who will be responsible for sponsoring the response should there be an evidentiary hearing;

2. Should the HECO Companies claim that any information is not discoverable for any reason:

    a. State all claimed privileges and objections to disclosure;

    b. State all facts and reasons supporting each claimed privilege and objection;

    c. State under what conditions the HECO Companies is willing to permit disclosure to SA/HSEA (e.g. protective agreement, review at business offices, etc.); and

    d. If the HECO Companies claim that a written document or electronic file is not discoverable, besides complying with subparagraphs 2a-c, identify each document or electronic file, or portions thereof, that the HECO Companies claim are privileged or will not be disclosed, including the title or subject matter, the date, the author(s) and the addressee(s).

SA/HSEA-QI-IR-1 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 10; FIT Release Schedule.

a. Please explain in detail the rationale for "A Release of an initial increment of Tier 1 queue capacity up to the 5% reservation, less converted NEM projects." Please provide all supporting documents.

b. Please explain in detail how "A Release of an initial increment of Tier 1 queue capacity up to the 5% reservation, less converted NEM projects" is consistent with the Commission Decision and Order filed in this docket on September 25, 2009.

c. Please explain in detail how "A Release of an initial increment of Tier 1 queue capacity up to the 5% reservation, less converted NEM projects" will not hinder the implementation of an effective FIT program in Hawaii.

d. Approximately how much energy is "an initial increment of Tier 1 queue capacity up to the 5% reservation, less converted NEM projects."

SA/HSEA-QI-IR-2 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 10; FIT Release Schedule; "Initial Tier 2 Release. A release of an initial amount of Tier 2 queue capacity."

a. What amount is the HECO Companies anticipating for the "initial amount"? Please explain in detail how the HECO Companies came up or plan to come up with this "initial amount."

b. The Merrimack Report states that the IO will be consulted as to the "timing and amount" of the "initial amount"; will the parties to this Docket also be consulted? Please detail the steps and timeline for this process, with reference to specific dates if possible.

c. Will the "timing and amount" of this "initial amount" be subject to Commission approval prior to implementation?

d. Please explain in detail the rationale for "A release of an initial increment of Tier 2 queue capacity." Please provide all supporting documents.

e. Please explain in detail how "A release of an initial increment of Tier 2 queue capacity" is consistent with the Commission Decision and Order filed in this docket on September 25, 2009.

f. Please explain in detail how "A release of an initial amount of Tier 2 queue capacity." will not hinder the implementation of an effective FIT program in Hawaii.

SA/HSEA-QI-IR-3 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 11; FIT Release Schedule; "Initial Tier 2 Release. A release of an initial amount of Tier 3 queue capacity."

e. What amount is the HECO Companies anticipating for the "initial amount"? Please explain in detail how the HECO Companies came up or plan to come up with this "initial amount."

f. The Merrimack Report states that the IO will be consulted as to the "timing and amount" of the "initial amount," will the parties to this Docket also be consulted? Please detail the steps and timeline for this process, with reference to specific dates if possible.

g. Will the "timing and amount" of this "initial amount" be subject to Commission approval prior to implementation?

h. Please explain in detail the rationale for "A release of an initial increment of Tier 3 queue capacity." Please provide all supporting documents.

g. Please explain in detail how "A release of an initial increment of Tier 3 queue capacity" is consistent with the Commission Decision and Order filed in this Docket on September 25, 2009.

h. Please explain in detail how "A release of an initial amount of Tier 3 queue capacity." will not hinder the implementation of an effective FIT program in Hawaii.

SA/HSEA-QI-IR-4

a. How is the HECO Companies proposal to do an initial increment amount for Tiers 1, 2 and 3 consistent with its proposal in the PV Host Docket to install 4 MW on the HECO system for each of the two years and 2MW on both the HELCO and MECO system for each of the two years? Please explain in detail.

b. Rather than doing an initial increment amount for Tiers 1, 2 and 3, wouldn't it be more prudent for the HECO Companies to suspend or withdraw its PV Host Application to allow for "continual evaluation and opportunity for improvement at each stage" of the FIT program? If not, please in detail why not.

SA/HSEA-QI-IR-5 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 11; "Release of Subsequent Queue Capacities. The Company would determine which Tier or Tiers would then be designated for additional releases after consultation with the IO and consideration of system reliability, curtailment, and potential pent up demand in any Tier category. This could result in issuing a release of additional queue capacity in any single or all of the three of the Tiers."

a. Will the parties to this Docket have any say as to when subsequent queue capacities are released? If not, why not.

b. Please explain in detail what factors you will be applying in regards to "system reliability" in making the decision as to when subsequent queue capacities are released.

c. Please explain in detail what factors you will be applying in regards to "curtailment" in making the decision as to when subsequent queue capacities are released.

d. Please explain in detail what factors you will be applying in regards to "potential pent up demand in any Tier category" in making the decision as to when subsequent queue capacities are released.

SA/HSEA-QI-IR-6 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 10; "In consultation with the IO, Hawaiian Electric will reserve the right to impose additional rules or procedures as necessary to ensure that the FIT program is proceeding in accordance with the Commission's Orders."

a. Please provide specific examples of the additional rules or procedures you are contemplating may need to be imposed.

b. Before these additional rules or procedures are imposed, will the parties to this docket be provided with an opportunity to review and comment? If yes, please detail the steps and timeline for this process, with reference to specific dates if possible.

c. Will these additional rules or procedures be subject to Commission approval prior to being imposed by Hawaiian Electric?

SA/HSEA-QI-IR-7 Has the IO met privately with any of the other parties to this Docket, besides the HECO Companies?

SA/HSEA-QI-IR-8 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 11;

"Reliability Team."

a. Please identify who will be on the "Reliability Team."

b. Will any intervenors in the FIT Docket be on the "Reliability Team"? If yes, please identify those parties and explain how they were selected. If not, why not?

SA/HSEA-QI-IR-9 Ref.: Merrimack Energy Group, Inc. Report ("Merrimack Report") at 8; Interconnection Assessment and Review Process; "FIT projects will be treated on an equal basis compared to other distributed generation in terms of interconnection and integration with the grid. The ability of each of the Companies' grid systems to integrate distributed generation projects will be subject to the Reliability Standards that are being developed in this docket as well as subsequent policy decisions".

a. How do the HECO Companies define distributed generation? Please provide a reference for the definition. Would the HECO Companies definition include projects in its proposed PV Host Program?

b. If yes, wouldn't this result projects in its proposed PV Host Program competing with FIT projects for interconnection and integration on the grid? If not, why not?

c. Please define with specificity what "subsequent policy decisions" to which the Merrimack Report is referring.

SA/HSEA-QI-IR-10 a. Please specify how much time an average IRS will take, and how much it will cost.

b. While an IRS is being conducted for a FIT project, will other FIT projects and/or distributed generation projects be allowed to pass it in the queue?

SA/HSEA-RS-IR-11 Ref.: Proposed FIT Reliability Standards for the Hawaiian Electric Companies, Exhibit 1, p.1. The HECO Companies quote the Commission's September 25, 2009 D&O regarding the "obligation to refuse to interconnect projects that will substantially compromise reliability"

How are the HECO Companies choosing to operationalize the Commission's use of word "substantially" for the purpose of discriminating between projects that will and will not compromise reliability. Please provide any references that help clarify the proposed

use definition.

SA/HSEA-RS-IR-12 Ref.: Proposed FIT Reliability Standards for the Hawaiian Electric Companies, Exhibit 1, p.42, the HECO Companies definition for "Reliability Standards."

Please explain how the HECO Companies formulated this definition of reliability standards, including relevant references. If the definition is borrowed from an existing source, please provide specific reference information.

SA/HSEA-RS-IR-13 What is the HECO Companies' plan for paying for interconnection costs at problem feeders in the FIT Program. Please explain in detail under which circumstances these costs (a) will or might be and (b) will not be borne by the utility and the rationale the Companies will use to distinguish between the two circumstances.

SA/HSEA-RS-IR-14 Please provide any historical incident report or documentation of grid reliability disruption due to intermittent resources over the last five years on the HELCO and MECO grids.

SA/HSEA-RS-IR-15 Please describe in detail the Reliability Standards that are applied to current projects on the HELCO, MECO and HECO systems. In doing so, please highlight any differences across the three utilities and/or within the three grids of the MECO system. In addition, please specify what standards were applied to guide the interconnection of the following distributed systems:

a. The PV system at HECO's Archer Street facility;

b. Sopogy's NELHA CSP facility;

c. Castle & Cook's Lanai PV; and

d. The CHP system at Manele Bay.

SA/HSEA-RS-IR-16 Regarding reliability standards for transmission level IPP projects.

a. Please provide the Reliability Standards for all existing large scale Independent Power Producers on the transmission level providing firm power;

b. Please provide the Reliability Standards for all existing large scale Independent Power Producers on the transmission level providing non-firm power;

In responding, please indicate when the Reliability Standards for each project were adopted and when they were approved by the Commission.

SA/HSEA-RS-IR-17 Please provide a matrix listing distribution circuits for each utility with current peak loads, minimum load; current firm DG penetration levels, current non-firm DG penetration levels, firm DG pipeline, and non-firm DG pipeline.

SA/HSEA-RS-IR-18 Exhibit A of the October 2008 Energy Agreement between the HECO Companies included expected levels of installation for the pipeline installations that are under way and projected installations of new PV systems. Why are these generators only now being considered a significant impediment to the interconnection of additional DG on the MECO and HELCO grids?

SA/HSEA-RS-IR-19 The maximum grid-wide penetration renewables on the HELCO system is roughly 50 percent, and on the MECO system it is roughly 15 percent. After excluding the firm renewable power provided by PGV on the HELCO system, what explains the HELCO system's ability to operate reliably with a higher share of renewables?

HSEA/SA-RS-IR-20 Please explain how, if at all, the non-coincident nature of disturbances in the generation of geographically distributed PV systems has been factored into the development of the HECO Companies' proposed reliability standards. Please also explain how this differs from the treatment of the generation profiles of concentrated firm resources on these same systems.

SA/HSEA-RS-IR-21 The reference from the FIT D&O (at 44) cited by the HECO Companies appears to be extracted from a more comprehensive directive regarding system reliability that states:

"To address these concerns, the commission will limit additional wind generation projects (up to 100 kW) on the HELCO and MECO systems for purposes of eligibility for the initial FIT. In addition, the commission will reiterate the HECO Companies' continuing obligation to ensure system reliability."

Please explain how this supports the development of a new grid-wide

limitation that deals only with DG in the aggregate.

SA/HSEA-RS-IR-22 In proposing the "reliability standards" at 5% of grid-wide peak load for DG, are the HECO Companies concerned with curtailment or with system instability, or both? If both, please explain how the 5% deals with interconnection of system above 5% that would not destabilize the grid but may result in curtailment.

Please explain with specificity how the proposed reliability standards prevent curtailment on transmission level projects?

SA/HSEA-RS-IR-23 Please list the existing and planned renewable resources referenced on page 4 , paragraph 1, sentence 3, of the HECO Companies' February 8, 2010 reliability standards filing, including the anticipated placed in service dates for "planned" resources.

SA/HSEA-RS-IR-24 Regarding the "Reliability Standards Working Group" proposed on pages 4-5 of the February 8, 2010 filing, please detail the anticipated timelines for the following steps:

a. Selecting members of the group;

b. Convening meetings(s) of the group;

c. Conducting technical studies of the Companies' grids as a result of the directives of this group;

d. Conducting research on existing literature on these same issues in support of the group's activities;

e. Implementing any suggestions by the group to address the concerns raised by the HECO Companies in the February 8, 2010 filing.

SA/HSEA-RS-IR-25 Regarding "dynamic stability issues" on page 6, paragraph 2 of the HECO Companies' February 8, 2010 filing:

a. Please describe in detail the "significant dynamic stability issues" being encountered on the HELCO and MECO grids due to "distributed PV."

b. Please explain how the proposed reliability standards address these issues.

c. Please explain how the Companies attribute to PV "significant dynamic stability issues" when the "production profile, degree of variability and correlation between sites is not known."

d. Please explain why the capacity factor of the PV systems on the HECO and HELCO grids is not known to the HECO Companies given the location and module specific detail provided to the Companies through the standard interconnect, net metering, etc. agreements.

e. Please present and describe the evidence supporting the HECO Companies' position that DG/distributed PV, rather than (a) larger transmission level resources and/or (b) the technological characteristics of the Companies' grids are responsible for the "significant dynamic stability issues" of concern to the Companies.

SA/HSEA-RS-IR-26 Regarding the issue of exported power entering the sub-transmission level or transmission systems (Page 7 of the February 8, 2010 filing):

a. Please explain the reliability impacts that concern the HECO Companies in the event that exported power reaches the sub-transmission or transmission systems.

b. Please specify the incidents and conditions under which this has occurred on any of the HECO Companies' grids.

SA/HSEA-RS-IR-27 Please explain how, from the ratepayers' perspective, "better cost performance" can be achieved with central station power than DG that functions in a DSM role, such as distributed PV systems interconnected under standard interconnect agreements.

SA/HSEA-RS-IR-28 Please explain in detail the ongoing frequency concerns presented by distributed PV with under-frequency trip setting at 57 Hz for the HELCO system.

SA/HSEA-RS-IR-29 Please state and explain, to the closest reasonable numerical approximation, the daytime relationship between distributed renewable resources and grid-wide frequency changes taking an instantaneous loss of 10 MW loss of DG as a benchmark. That is, what is the frequency impact in Hz of the loss of 10 MW of DG of the HELCO grid?

SA/HSEA-RS-IR-30 Please explain in detail the ongoing frequency concerns presented by distributed PV with under-frequency trip setting at 58 Hz for the MECO

system.

SA/HSEA-RS-IR-31 Please state and explain, to the closest reasonable numerical approximation, the daytime relationship between distributed renewable resources and grid-wide frequency changes taking an instantaneous loss of 10 MW loss of DG as a benchmark. That is, what is the frequency impact in Hz of the loss of 10 MW of DG of the HELCO grid?

SA/HSEA-RS-IR-32 Please provide a version of Figure 2 "System Load 1/19/10" in which the legend and axis labels are legible.

SA/HSEA-RS-IR-33 Please describe with specificity the "mitigation measures" referenced on page 19, paragraph 3 of the February 8th filing, including their nature, costs and deployment timelines.

SA/HSEA-RS-IR-34 Please list the number of incidents and total number of hours that existing renewable resources have been curtailed between the hours of 9:00 AM and 4:00 PM from January 2005 through January 2010 on the HELCO system. Please provide incident reports and/or other forms of documentation to support these data.

SA/HSEA-RS-IR-35 Please list the number of incidents and total number of hours that existing renewable resources have been curtailed between the hours of 9:00 AM and 4:00 PM from January 2005 through January 2010 on the MECO system. Please provide incident reports and/or other forms of documentation to support these data.

CERTIFICATE OF SERVICE

The foregoing Information Request to Hawaiian Electric Company on Queuing and Interconnection Procedures for Feed-in Tariffs was served on the date of filing by hand delivery or electronically transmitted to the following Parties:

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